

ABSTRACT

A system and method for optical power transient control and prevention in communication networks. An optical signal propagating on a network is demultiplexed into individual spectral bands, e.g. at an OADM, and an optical power monitor point is included into each band. A separate idler laser is provided for each OADM band. The power output of each laser is adjusted such that it compensates for the signal power lost from each band. The wavelength of each laser is chosen to fall within the associated OADM spectral band, but outside of the window of individual signal wavelengths, so that it may propagate through the network without causing deleterious interference at the receiver.